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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,176	05/05/2005	Reinhard Maletz	HO1.2-11874	9987

490 7590 10/17/2007  
VIDAS, ARRETT & STEINKRAUS, P.A.  
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EDEN PRAIRIE, MN 55344

EXAMINER
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PEPITONE, MICHAEL F

ART UNIT	PAPER NUMBER
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4134

MAIL DATE	DELIVERY MODE
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10/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/534,176	MALETZ ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Pepitone	4134	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/5/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/17/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 4 is objected to because of the following informalities: The extraneous word “either” in first line of the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112 and § 101***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 18: Claim 18 provides for the use of the composition of claim 1 as a dental material, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

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Claim 18 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5-11, and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Jones *et al.* (US 2002/0193463).

Regarding claims 1, 11, 14, and 17: Jones *et al.* teaches a filler for dental composite materials comprising a polymerizable organic binder and a filler in a quantity of 5-35 weight% [instant claim 14], wherein the filler particles are obtained by spray drying and have the shape of a doughnut {torus} with an average external diameter of about 5  $\mu$ m and 15  $\mu$ m [instant claims 1, 11, and 17] (§ 1-2, 9-10, 29, 58).

Regarding claims 5-7: Jones *et al.* teaches the basic claimed composition [as set forth above with respect to claim 1], wherein the filler contains additional fragment shaped and/or

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spherical shaped inorganic filler particles [instant claim 5] (§ 31, 25-26, 55), specifically fumed silica [instant claim 6] (§ 68) or spherical silica obtained by a silica sol [instant claim 7] (§ 65).

Regarding claim 8: Jones *et al.* teaches the basic claimed composition [as set forth above with respect to claim 1], wherein the doughnut {torus} shaped filler particles are silanized (§ 64).

Regarding claims 9 -10: Jones *et al.* teaches the basic claimed composition [as set forth above with respect to claim 1], wherein the binder includes ethylenically unsaturated monomers and oligomers {bis-GMA, TEGDMA} [instant claim 9] (§ 66, 68), curable chemically and/or photochemically [instant claim 10] (§ 66, 68).

Regarding claims 15 -16: Jones *et al.* teaches the basic claimed composition [as set forth above with respect to claim 1], wherein the filler particles comprise silicon dioxide and/or heavy metal oxides [instant claim 15] (§ 31-48), specifically zirconium oxide, barium oxide, and strontium oxide [instant claim 16] (§ 66, 68).

Claims 2-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Jones *et al.* (US 2002/0193463).

Regarding claims 2-4: Jones *et al.* teaches a filler for dental composite materials comprising a polymerizable organic binder and a filler in a quantity of 5-35 weight%, wherein the filler particles are obtained by spray drying and have the shape of a doughnut {torus} [instant claims 3-4] with an average external diameter of about 5  $\mu\text{m}$  and 15  $\mu\text{m}$  [instant claim 2], further comprising a silica sol {SiO<sub>2</sub> particles dispersed in polymerizable resin} (§ 1-2, 9-10, 29, 58, 68).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones *et al.* (US 2002/0193463), as applied to claim 1.

Regarding claims 12-13: Jones *et al.* teaches the basic claimed composition [as set forth above with respect to claim 1], but does not teach an internal diameter of the torus-shaped filler of 0.2-20  $\mu\text{m}$  [instant claim 12] or 0.2-20  $\mu\text{m}$  [instant claim 13]. However, the Office takes Official Notice that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) [MPEP 2144.05]. At the time of invention a person of ordinary skill in the art would have found it obvious to have optimized the internal diameter, as taught by Jones *et al.*, as commonly practiced in the art, and would have been motivated to do so since the capability of the ceramic filler to mechanically lock into the resin matrix of the composition is influenced by the shape of the filler.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. See attached form PTO-892.

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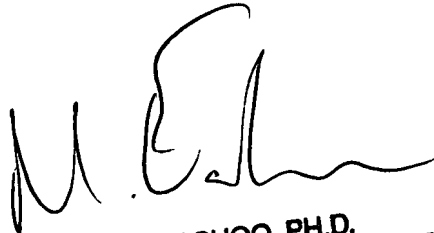
*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pepitone whose telephone number is 571-270-3299. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MFP  
9-October-2007

  
MARK EASHOO, PH.D.  
SUPERVISORY PATENT EXAMINER  
15/10/07